

F/2 Broth



Medium used for the cultivation and enumeration of coastal marine algae, especially diatoms.

• CONTENTS (Liter)

Sodium Nitrate	0.075 g
Monosodium Phosphate	0.005 g
Sodium Silicate	0.03 g

• PROCEDURE

Suspend 0.11 G of powder in 1 L of seawater. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Aseptically add 2 vials of F/2 Trace Metal Solution (MB-F0766) and 2 vials of F/2 Vitamin Solution (MB-F0767). Mix well. Pour into tubes.

F/2 Trace Metal Solution

1 vial contents (each vial is sufficient for 500 mL of medium)

Iron (III) Chloride Hexahydrate	1.575 mg
Ethylenediaminetetraacetic Acid Disodium Salt Dihydrate	2.18 mg
Copper (II) Sulfate Pentahydrate	4.9 µg
Sodium Molybdate Dihydrate	3.15 µg
Zinc Sulfate Heptahydrate	11.0 µg
Cobalt (II) Chloride Hexahydrate	5.0 µg
Manganese (II) Chloride Tetrahydrate	90.0 µg

F/2 Vitamin Solution

Thiamine HCl	50.0 µg
Biotin	0.25 µg
Cyanocobalamin	0.25 µg

• INTERPRETATION

F/2 Broth is a medium used for the cultivation and enumeration of coastal marine algae, especially diatoms. Sodium nitrate serves as the source of nitrogen. Monosodium phosphate is the buffering agent. Sodium silicate provides the essential electrolytes and minerals.

• TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at $17 \pm 1^\circ\text{C}$ for 3 - 5 days or up to 7 days under 2000 - 3000 light intensity. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: white

Prepared medium

Appearance: slightly opalescent

Color: colorless

Incubation conditions: $17 \pm 1^{\circ}\text{C}$ / 3 - 5 days or up to 7 days under 2000 - 3000 light intensity.

Microorganism	Inoculate CFU	Growth
<i>Skeletonema costatum</i>	heavy	good
<i>Thalassiosira pseudonana</i>	heavy	good

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at $2 - 8^{\circ}\text{C}$.

• REFERENCES

1. Guillard, R.R.L. 1975. Culture of phytoplankton for feeding marine invertebrates. pp 26-60. In Smith W.L. and Chanley M.H (Eds.) Culture of Marine Invertebrate Animals. Plenum Press, New York, USA.
2. Guillard, R.R.L. and Ryther, J.H. 1962. Studies of marine planktonic diatoms. I. *Cyclotella nana* Hustedt and *Detonula confervacea* Cleve. Can. J. Microbiol. 8: 229-239.

• PACKAGE

Cat. No : MB-F0701 F/2 Broth	500 G
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